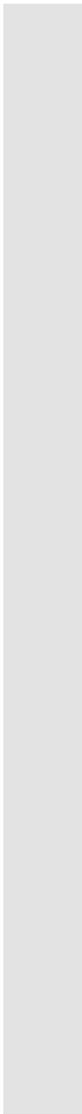


Disability Insurance: The Private Sector

Jeffrey L. Schuh FSA MAAA ACIA

Richard Leavitt ASA MAAA



Overview

Market Overview

Private Disability Market

1. Individual Disability Market (IDI)
 - Mostly professional occupations: physicians, attorneys, etc.
 - Individually underwritten
 - Issue-age rates with long term rate guarantees (non-can, GR)
 - \$5 bn annual premium
 - Roughly 15 insurance carriers
2. **Group Disability Market (STD/LTD)**
 - Wide range of covered industries & occupations
 - Guaranteed Issue
 - Attained-age rates with 1-3 year rate guarantees
 - \$17 bn annual premium (\$5 bn STD, \$12 bn LTD)
 - Roughly 30 insurance carriers

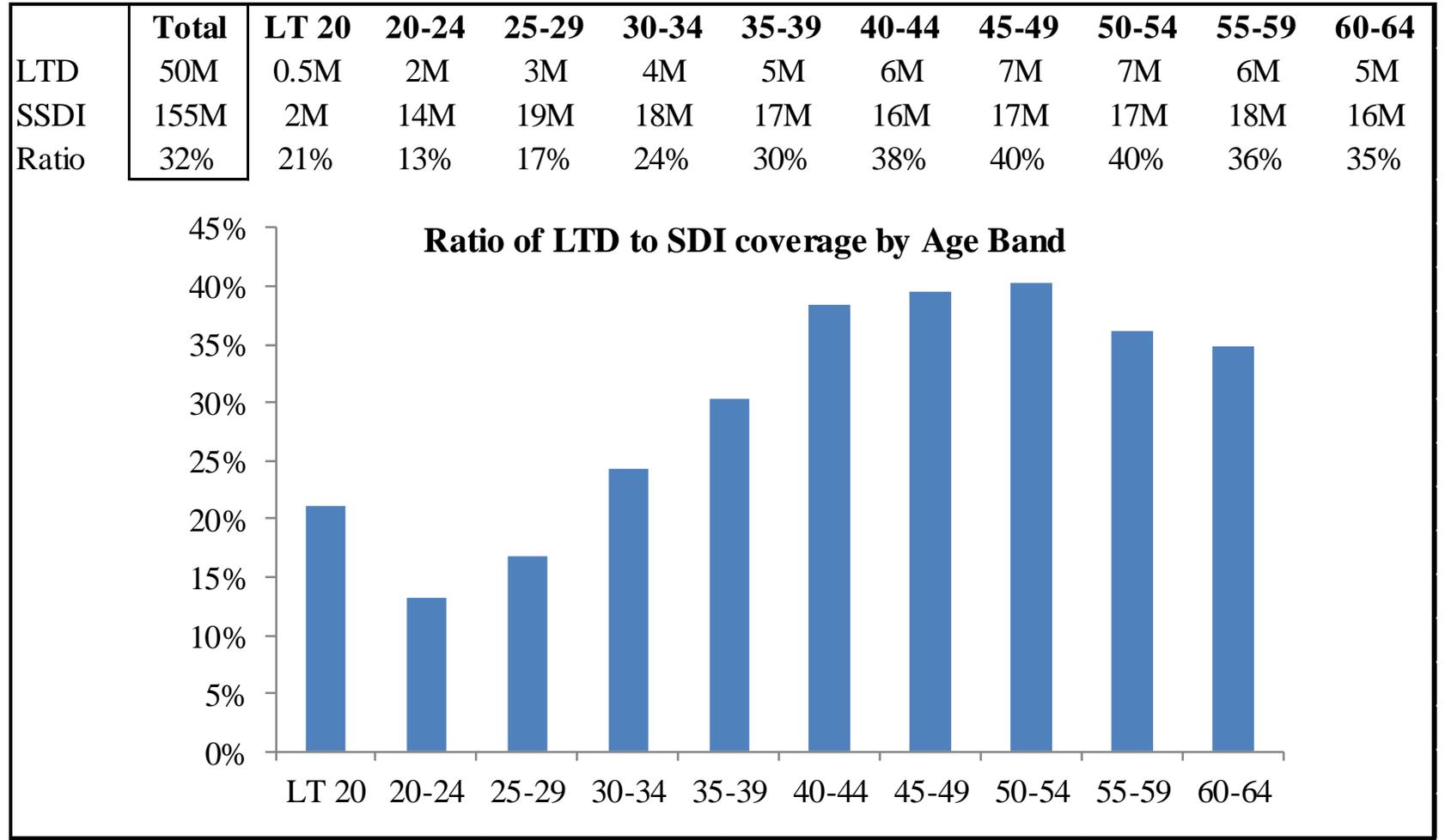
Market Overview

Group LTD

- Average annual premium ~ \$250 per employee
- Covered employees ~ 50 million lives
- Penetration ~ 35% of employees have LTD
- Penetration varies greatly by group size
- Penetration varies with employer funding
- Demographics of Group LTD insured lives – see next slides

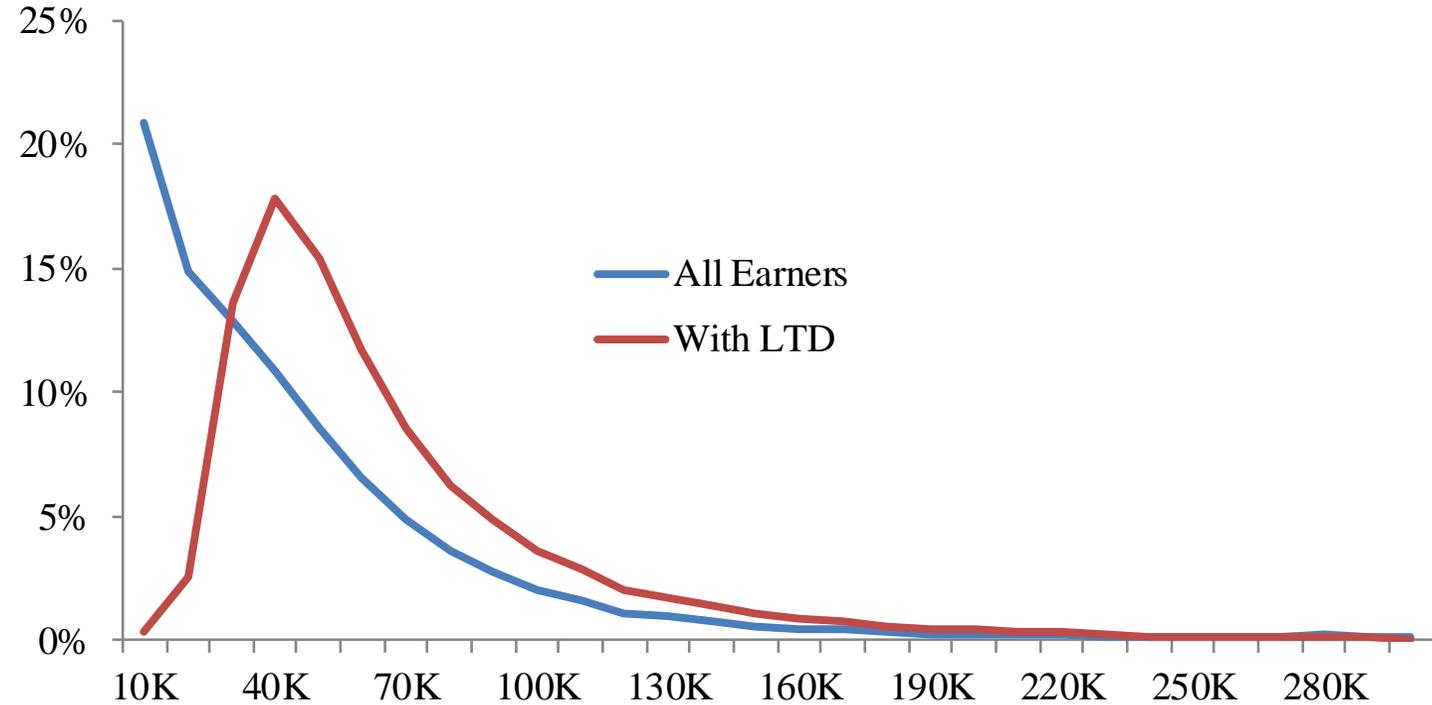
Market Overview

LTD Coverage is between 30% and 35% of the SSDI Coverage



Market Overview

Private Coverage tends to be for higher wage earners



Average Salary by Percentile

	10%	25%	Median	75%	90%
BLS 2017 - National	\$20K	\$25K	\$38K	\$61K	\$96K
2017 LTD Prospects	\$26K	\$34K	\$50K	\$78K	\$122K

Product Overview

Short Term Disability (STD)

- Elimination period: 1-2 weeks
- Benefit period: 3 or 6 months
- Replacement ratio: 70-100% of Salary
- Definition of disability: unable to perform “own job”
- Offset: typically does not integrate with SSDI or other income
- Incidence rate: 60 / 1,000 lives insured (per annum)

Long Term Disability (LTD)

- Elimination period: 3 or 6 months
- Benefit period: to age 65 or SSNRA
- Replacement ratio: 60-70% of Salary
- Definition of disability: “own occ” (first 24 mos.) / “any occ” (> 24 mos.)
- Offset: typically integrates with SSDI or other income
- Incidence rate: 3-4 / 1,000 lives insured (per annum)

Product Overview

Long Term Disability (LTD)

Benefit Example

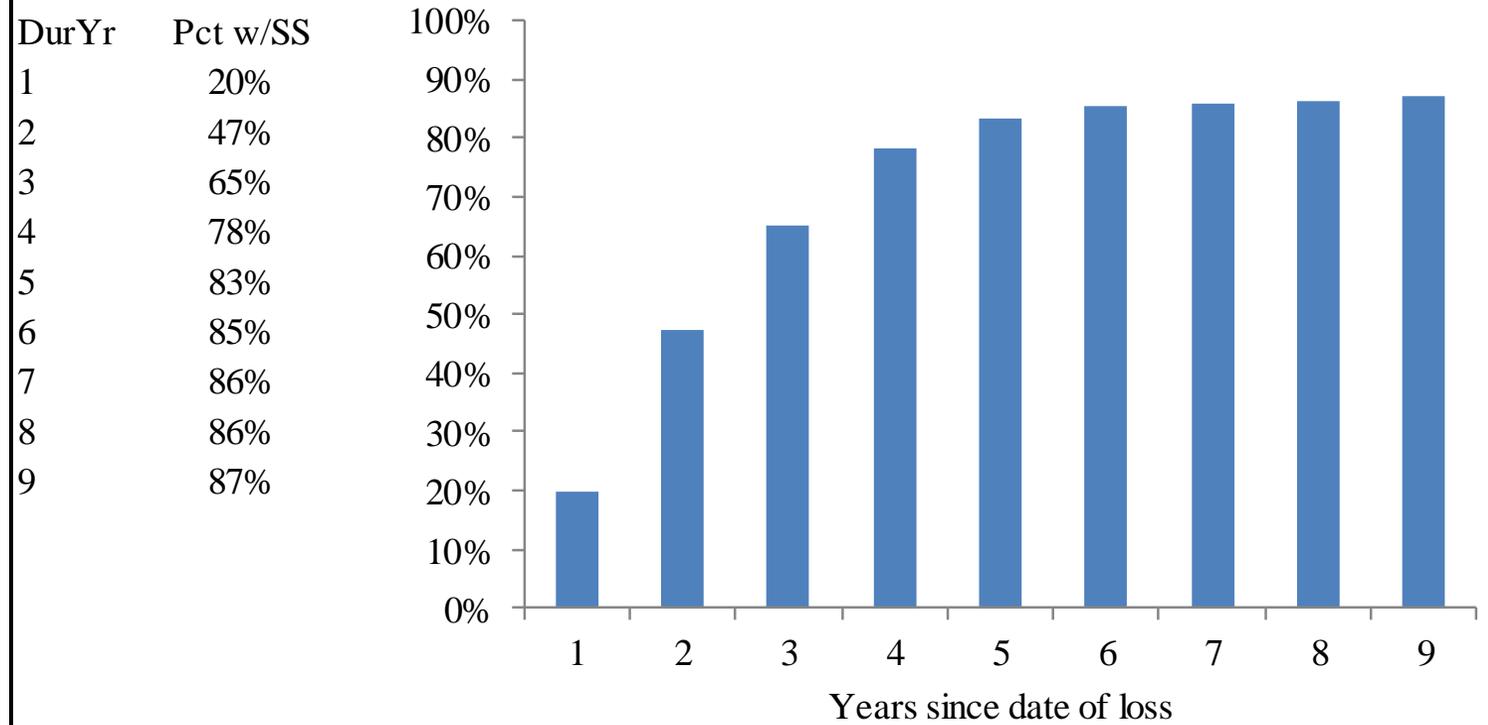
\$5,000/month	Salary
<u> x 60%</u>	LTD Replacement Ratio
\$3,000/month	LTD Gross Monthly Benefit

If claimant awarded \$1,000/month SSDI, it is offset from gross benefit:

\$3,000/month	LTD Gross Monthly Benefit
<u>-\$1,000/month</u>	SSDI Benefit
\$2,000/month	LTD <i>Net</i> Monthly Benefit

Product Overview

Probability of open LTD Claim having SS (as of year-end 2015)



Product Overview

LTD Claims Management

Claim approvals

- Validate inability to work (APS, IME, FCE)

Return to work

- Primary focus is to help claimant return to gainful employment
- Work directly with employee and employer
- Vocational Rehabilitation, worksite modification, financial incentives, etc. all used as tools to assist with RTW

SSDI Advocacy

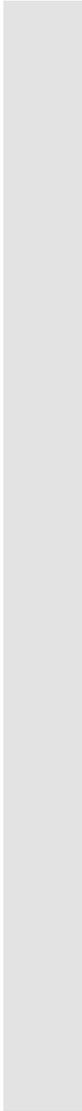
- Help claimants with SSDI application process (often 3rd party)
- Reduces insurance benefit, but claimant eligible for Medicare and typically receives the annual COLA increase

Product Overview

Actuarial considerations for Group LTD

- ❑ Incidence rates
- ❑ Claim termination rates
 - Death
 - Recovery
- ❑ Offsets
 - Amount
 - Duration
- ❑ Interest Rates

Note: considerable work recently by SOA on claim termination rate studies, yet more than 30 years since industry-wide Group LTD incidence study.



Trends

Trends

LTD Cross Industries Studies

GLTD2008: Society of Actuaries Termination Study

Years: 1997-2006 Participation: 21 carriers, 12 of top 15

GLTD2016: Society of Actuaries Termination Study

Years: 2004-2012 Participation: 26 carriers, All of top 15

2018 Private Incidence Study

Years: 2008-2017 Participation: 19 carriers, All of top 15

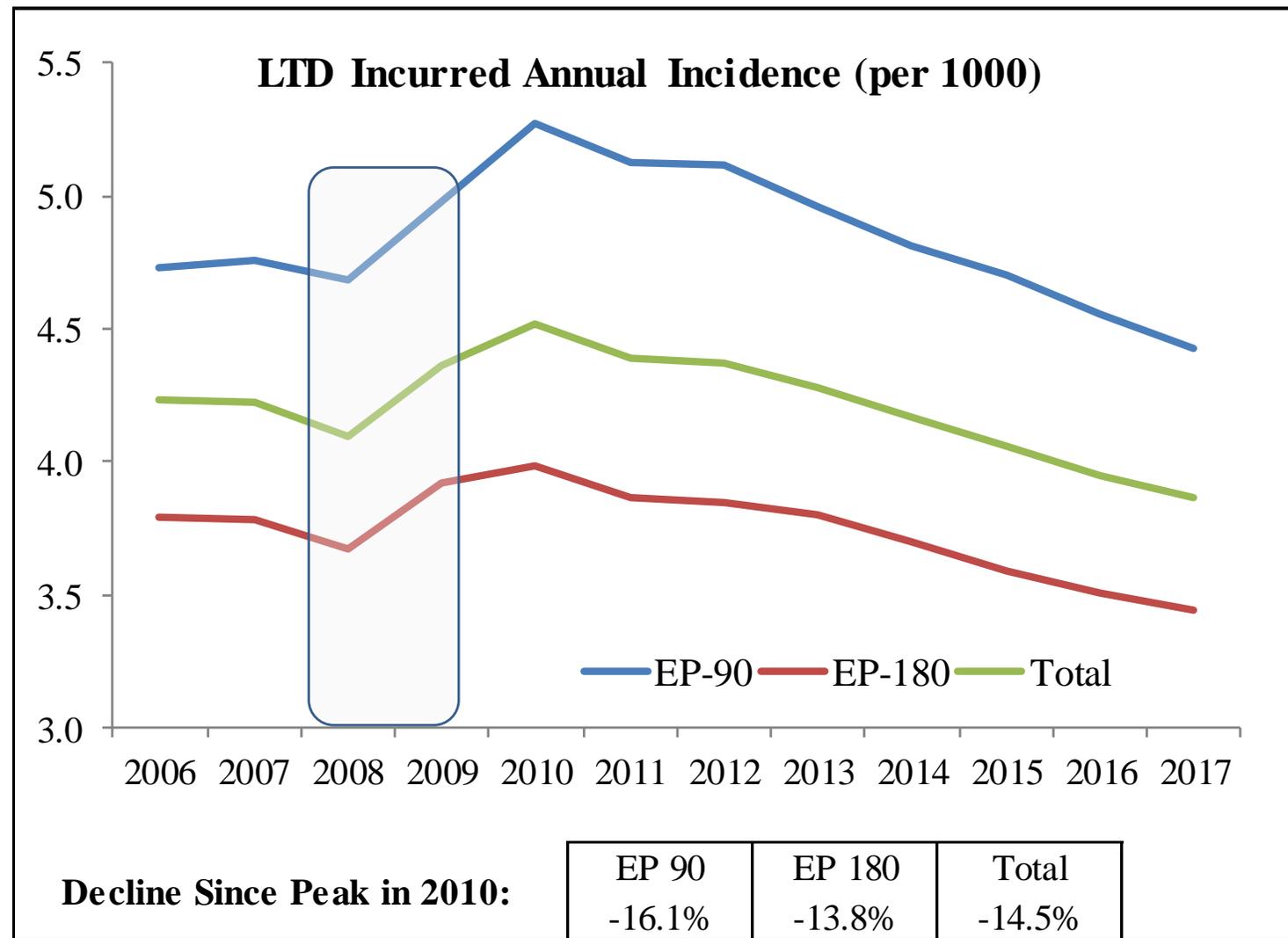
2011 Private Incidence Study

Years: 2006-2010 Participation: 19 carriers, All of top 15

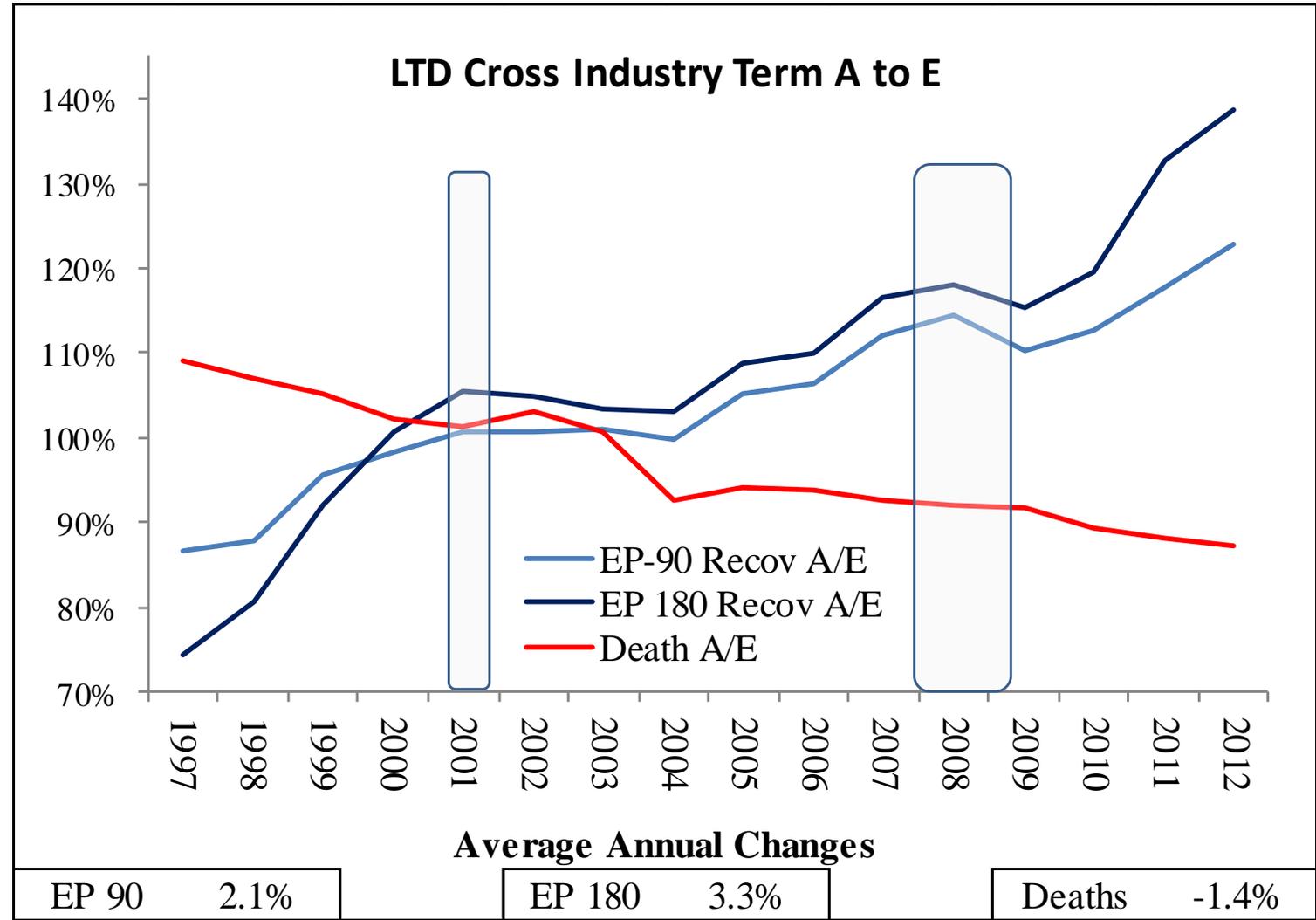
2016 Private SS Approval Study

Years: 2005-2016 Participation: 19 carriers, All of top 15

Incidence Trends



Claim Termination Trends



Expectation: E = GLTD2008 Reserve Table (based on 1997-2006)

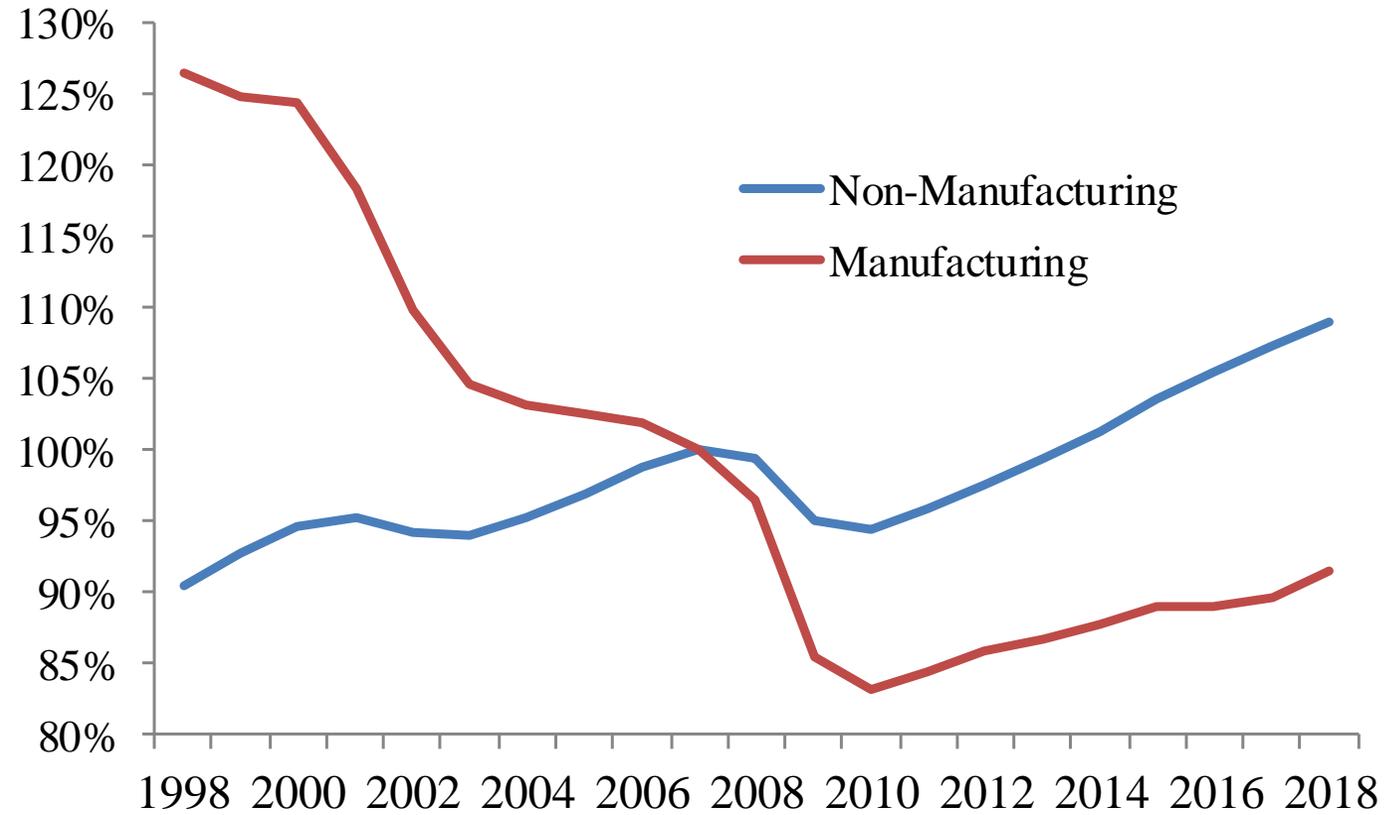
Trends

Common Industry Speculations on declining incidence

1. Improving economy and low unemployment reduces incentive to file: will revert if economy worsens
2. Older age workers (55-65) do not have sufficient savings... reluctant to leave workforce for disability due to fear of losing their jobs
3. Increasing automation reduces physical nature of many jobs.
4. Increased workplace accommodation (remote employment options) makes it easier to work with a disabling condition
5. Improved health outcomes reduces prevalence of long-term disabilities.

Trends

Total Employment Relative to the 2007 Level



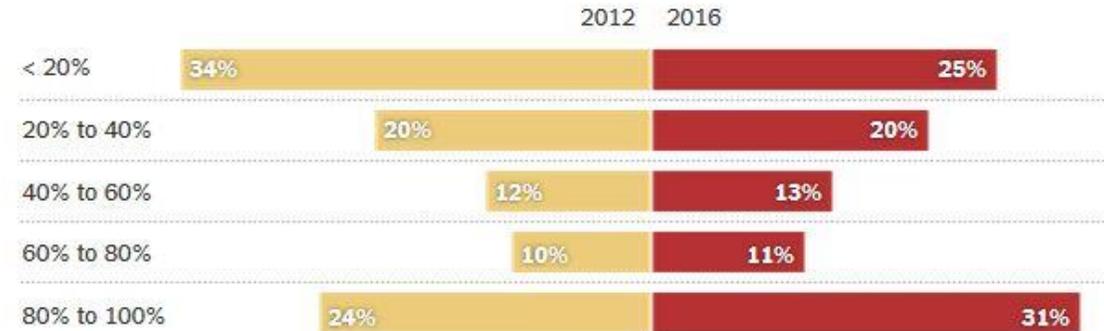
Speculation: More physical jobs lost in 1998-2010, with recent job growth being in occupations involving less physical tasks

Trends

Increasing Remote Employment

The Time Employees Spend Working Remotely

Americans who work remotely are doing so for longer periods of time.



Source: Gallup

<https://www.nytimes.com/2017/02/15/us/remote-workers-work-from-home.html>

Appendix

Disability incidence vs. Economy

- Studied in several international markets
- Strong evidence of correlation between disability and economy
- Attempts at quantifying this relationship using multi-variate models
 - Unemployment Rate
 - Consumer Confidence Index
 - Business Confidence Index
 - Gross Domestic Product
 - Interest Rate Spreads
 - Bankruptcies
- Yet, problems remain with using these models for projections due to uniqueness of each recession and over-fit issues

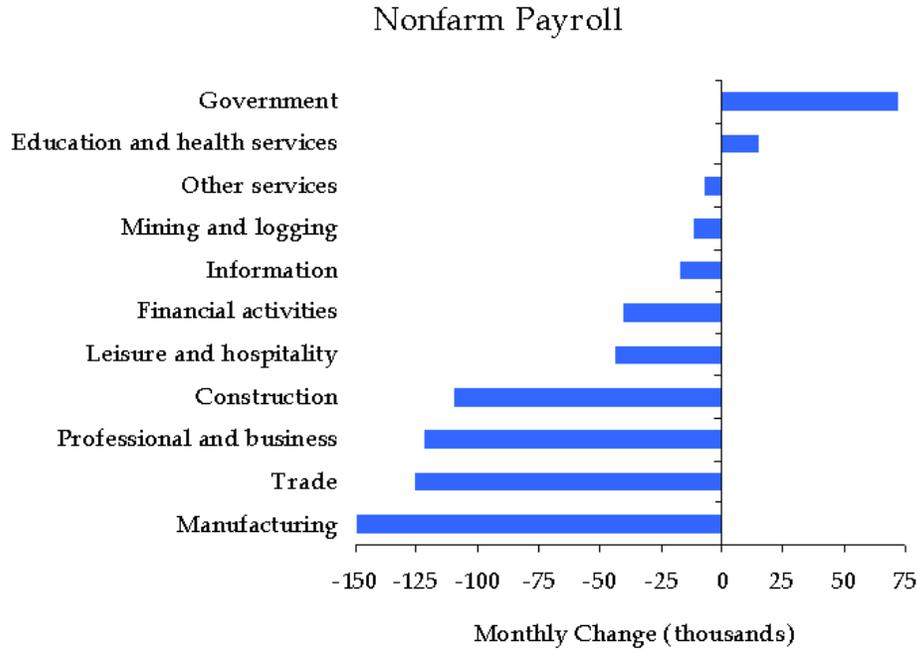
Appendix

Disability incidence vs. Economy – *a contrarian view*

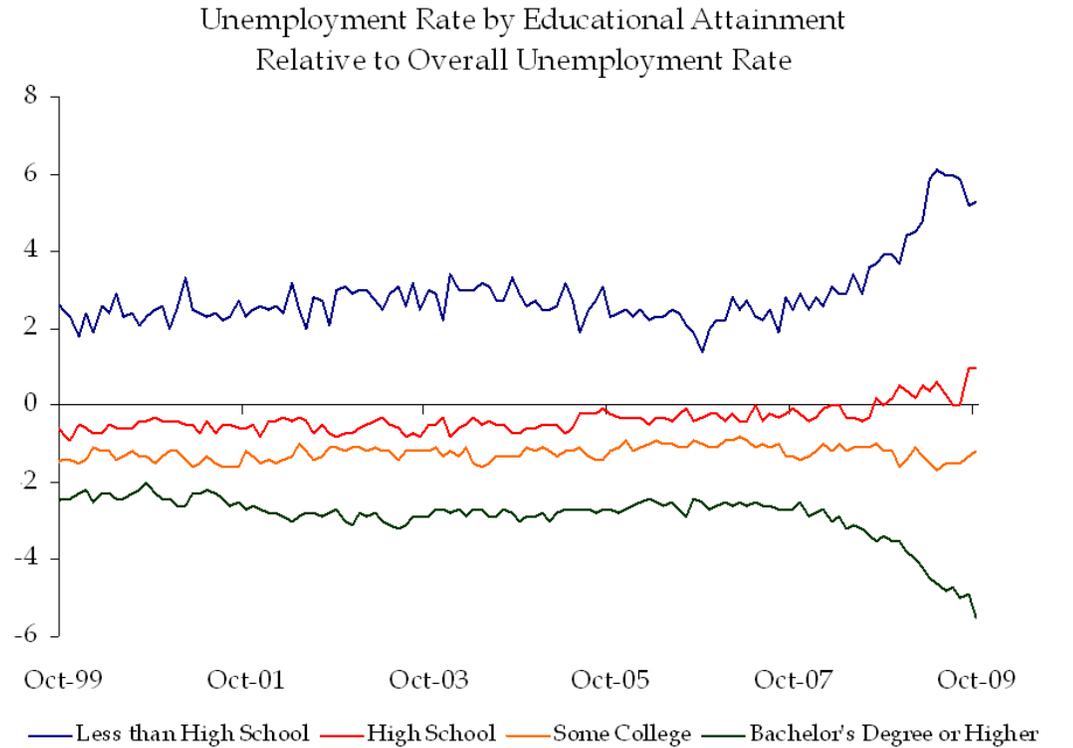
- Some international studies have not corroborated correlation
- Some U.S. Group LTD carriers indicated there were not seeing elevated incidence during 2008-2009, positing:
 - Concentrations in recession-resistant industries
 - Improved claims management (submitted vs. approved incidence)
- Some markets see “pro-cyclical” correlation (e.g. workers’ comp)
 - Claims decrease during recessions
 - Inexperienced workers first to released
 - Older (less safe) equipment first to be mothballed
 - Less overtime means less fatigue
 - Job Preservation
 - Hazardous occ cycle (e.g. construction)

Appendix

Recessions Are Not Equal Opportunity Events



ECONOMICDATA



ECONOMICDATA

Appendix

Q&A

About Smith Group

Smith LTD Management Group, Inc. is a disability and reinsurance consultant and a subsidiary of Guy Carpenter & Company, LLC, which is a global leader in providing risk and reinsurance intermediary services. Guy Carpenter is a wholly owned subsidiary of [Marsh & McLennan Companies](#) (NYSE: MMC), a global team of professional services companies offering clients advice and solutions in the areas of risk, strategy and human capital.

Smith Group provides this presentation for general information only. The information contained herein is based on sources we believe reliable, but we do not guarantee its accuracy, and it should be understood to be general insurance/reinsurance information only. Smith Group makes no representations or warranties, express or implied. The information is not intended to be taken as advice with respect to any individual situation and cannot be relied upon as such. Please consult your insurance/reinsurance advisors with respect to individual coverage issues.

Statements concerning tax, accounting, legal or regulatory matters should be understood to be general observations based solely on our experience as reinsurance brokers and risk consultants, and may not be relied upon as tax, accounting, legal or regulatory advice, which we are not authorized to provide. All such matters should be reviewed with your own qualified advisors in these areas.

Readers are cautioned not to place undue reliance on any historical, current or forward-looking statements. Smith Group undertakes no obligation to update or revise publicly any historical, current or forward-looking statements, whether as a result of new information, research, future events or otherwise.

This document or any portion of the information it contains may not be copied or reproduced in any form without the permission of Smith Group, except that clients of Smith Group need not obtain such permission when using this white paper for their internal purposes.

The trademarks and service marks contained herein are the property of their respective owners.

© 2016 Smith LTD Management Group, Inc.

RG A

The views and opinions expressed in this presentation are the views and opinions of the presenter, Jeffrey Schuh and not necessarily the views of Reinsurance Group of America, Incorporated or any of its subsidiaries. This presentation is made with the understanding that the presenter is not engaged in rendering legal, accounting, actuarial or professional services.